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EXAMINER	
ROGERS, MARTIN K	
ART UNIT	PAPER NUMBER
1747	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/583,810	JANSEN ET AL.	
	Examiner	Art Unit	
	MARTIN ROGERS	1747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 5, 8, 10, 7, 12, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873) and optionally Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994).

In regards to claims 1, 8, 10, and 17 Fagerburg teaches a composition for food packages (Column 1, lines 16-18) which contains at least 85 mole % of a terephthalic

acid which is reacted with ethylene glycol (Column 3, line 36) to make PET (Column 3, lines 29-30). 0.1 to 0.5 mol% of a polyester modifier with an aromatic ring and the required structure (Column 2, lines 54-68 and Column 3, lines 1-4) are also present. The polyester modifiers contain sodium (Column 3, line 12) as an alkali metal and the final product contains up to 3% diethylene glycol (Column 3, lines 42-44). The polyester has an inherent viscosity ranging from 0.3 to 0.9. Fagerburg is silent as to the presence of Na2HPO4 but do teach that a titanium catalyst is present for the etherification reaction.

Banach discloses that when using a titanium catalyst to create PET, it is beneficial to add a phosphate-forming compound such as Na2HPO4 (Column 4, lines 33-34) for the benefit of increasing the reactivity of the system (Column 4, lines 25-27). Banach discloses that the catalyst will be present in the amount of 25 ppm to 500 ppm and that the Na2HPO4 be present in the amount of 10% to 85% of the weight of the titanium catalyst and a lanthanide catalyst (Column 4, lines 49-52). The tetra-n-butyl titranate catalyst used has a molar weight of 340 g/mole, the hafnium tetrakis (acetylacetone) (Column 3, line 57) also used in the catalyst has a molecular weight of 574.5 g/mol, and the Na2HPO4 used has a molecular weight of 142 g/mole. Assuming a starting concentration of 250 ppm of titanium catalyst and a 90:10 (Column 4, line 6) molar ratio of titanium catalyst to hafnium tetrakis (acetylacetone), there would be a total of 296.9 ppm of catalyst. If the Na2HPO4 is present in the amount of 50% of the catalyst (Column 4, lines 49-50), this gives a total of 148.5 ppm of Na2HPO4. This translates to 32.4 ppm of phosphorus alone or 99.3 ppm of phosphate. Because the

Na2HPO4 is oxidized to form a phosphate (Column 4, lines 21-24), it is the examiner's position that there will not be any Na2HPO4 in the polyester. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Na2HPO4 within the required concentration ranges for the benefit of increasing the reactivity of the system.

It is the examiner's position that the NSR is an inherent property of the resin. Therefore, because the art of record discloses a resin with the composition required by Applicant, it will inherently also have the NSR properties required by Applicant.

In any event, the previous combination is silent as to the desired NSR of the resin, suggesting to one of ordinary skill in the art that any well known stretch ratio for use in conventional molding processes would be suitable. Shelby discloses that it is well known in the art to mold parisons into containers using a stretch ratio of 9 ([0023]). Therefore, one of ordinary skill in the art would have found it obvious to create a resin with a stretch ratio required by Applicant because this is a well known stretch ratio for use in conventional molding processes (as disclosed by Shelby). One of ordinary skill would have appreciated that the planar stretch ratio is matched to the NSR during the molding process (as evidenced by Sprayberry Page 2, lines 17-23). Sprayberry further discloses that this is beneficial for achieving desirable material distribution and optical properties in the final product (Page 2, lines 7-8). Therefore, one of ordinary skill would have found it obvious to match the NSR of the preform from the above combination to its planar stretch ratio for the benefit of achieving desirable material distribution and optical properties (as disclosed by Sprayberry).

In regards to claims 2 and 3, Fagerburg further discloses using an aromatic nucleus.

In regards to claim 5, Fagerburg further discloses that sodium is used (Column 3, line 12).

In regards to claim 7, Fagerburg et al. do not disclose the addition of any other modifying agents other than the difunctional sulfo-monomer (Column 2, line 49). It is therefore the examiner's position that there are none present in the polyester formed.

In regards to claim 12, Fegerson further discloses that the container be formed by biaxial stretching (Column 1, line 20).

In regards to claim 13, it is the examiner's position that the NSR is an inherent property of the resin. Therefore, because the art of record discloses a resin with the composition required by Applicant, it will inherently also have the NSR properties required by Applicant.

In any event, as discussed above, Shelby discloses that it is well known in the art to mold parisons into containers using a stretch ratio of 9 ([0023]). One of ordinary skill would have appreciated that the planar stretch ratio is matched to the NSR during the molding process (as evidenced by Sprayberry Page 2, lines 17-23).

Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Abe et al. (Japanese Patent 03146710).

In regards to claims 4 and 15, Fagerburg is silent as to the location of the bonds on the aromatic ring. Abe shows that it was well known in the art and therefore would have been obvious to one of ordinary skill in the art at the time of the invention to have the carboxylic side groups of the monomer be in the 3 and 5 position relative to the sulfate (English Language Abstract of JP 03146710).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Amano et al. (USP 6096683).

In regards to claim 6, the previous combination is silent as to the form of Na2HP04. Amano discloses that it was well known in the are and therefore would have

been obvious to one of ordinary skill in the art at the time of the invention to include the dodecahydrate (Column 8, line 7) form of Na2HPO4.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Schmidt et al. (Pre Grant Publication 2002/0177686).

In regards to claim 8, Fagerburg discloses that it is beneficial to minimize the critical stretch ratio in order to decrease the parison wall thickness and reduce processing time (Column 7, lines 19-30) but does not explicitly state what the NSR of the container is.

Schmidt discloses that it was well known in the art at the time of the invention to blow mold PET based (Abstract) containers with an NSR in the required range ([0073]). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to engineer the resin to have an NSR in the required range for the benefit of minimizing the processing time.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al.

(WO 98/48994) as applied to claim 1 above, and further in view of Po' et al. (USP 5252282).

In regards to claim 9, the previous combination is silent as to the crystallization half time of the material. Po discloses when modifying terephthalic acid polyesters with aromatic comonomers, it was well known in the art and therefore would have been obvious to one of ordinary skill in the art to have the resin possess a crystallization half time within the required range (Figure 1).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of *PET Packaging Technology* (hereinafter referred to at PPT).

In regards to claim 10, the previous combination teaches that the container be biaxially oriented (Column 1, line 20) but is silent as to the stretch ratios used in creating the PET container. The PPT teaches that it was well known in the art and therefore one of ordinary skill in the art at the time of the invention would have found it obvious to have an axial (hoop) stretch ration of 2.75 (Page 206, Chapter 7.6.6).

Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994) as applied to claim 1 above, and further in view of Fagerburg et al. (USP 4499262).

In regards to claim 11, the previous combination discloses that the PET container be used for beverages (Column 1, line 17) but is silent as to the volume of the container. Fedderson discloses that it was well known in the art and therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to create a beverage container that is a half of a liter in volume (Column 10, lines 38-39).

In regards to claim 14, the previous combination discloses that the PET container be used for beverages (Column 1, line 17) but is silent as to the volume of the container. Fedderson discloses that it was well known in the art and therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to create a beverage container that is a half of a liter in volume (Column 10, lines 38-39).

Claim 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous combination of Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et

al. (WO 98/48994) as applied to claim 12 above, and further in view of *PET Packaging Technology* (hereinafter referred to at PPT).

In regards to claim 13, the previous combination teaches that the container be biaxially oriented (Column 1, line 20) but is silent as to the stretch ratios used in creating the PET container. The PPT teaches that it was well known in the art and therefore that one of ordinary skill in the art at the time of the invention would have found it obvious to have an axial (hoop) stretch ratio of 2.75 (Page 206, Chapter 7.6.6).

In regards to claim 16, the previous combination discloses that the PET container be used for beverages (Column 1, line 17) but is silent as to the volume of the container. Fedderson discloses that it was well known in the art and therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to create a beverage container that is a half of a liter in volume (Column 10, lines 38-39).

Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fagerburg et al. (USP 4499262) in view of Banach et al. (US 5902873), Shelby et al. (Pre-Grant Publication 2002/0166833), Fagerburg et al. (USP 4499262), and Sprayberry et al. (WO 98/48994).

In regards to claim 18, Fagerburg teaches biaxially stretching a parison to form a container (Column 1, line 20) with a composition for food packages (Column 1, lines 16-

18) which contains at least 85 mole % of a terephthalic acid which is reacted with ethylene glycol (Column 3, line 36) to make PET (Column 3, lines 29-30). 0.1 to 0.5 mol% of a polyester modifier with an aromatic ring and the required structure (Column 2, lines 54-68 and Column 3, lines 1-4) are also present. The polyester modifiers contain sodium (Column 3, line 12) as an alkali metal and the final product contains up to 3% diethylene glycol (Column 3, lines 42-44). The polyester has an inherent viscosity ranging from 0.3 to 0.9. Fagerburg is silent as to the presence of Na2HPO4 but does teach that a titanium catalyst is present for the etherification reaction.

Banach discloses that when using a titanium catalyst to create PET, it is beneficial to add a phosphate-forming compound such as Na2HPO4 (Column 4, lines 33-34) for the benefit of increasing the reactivity of the system (Column 4, lines 25-27). Banach discloses that the catalyst will be present in the amount of 25 ppm to 500 ppm and that the Na2HPO4 be present in the amount of 10% to 85% of the weight of the titanium catalyst and a lanthanide catalyst (Column 4, lines 49-52). The tetra-n-butyl titranate catalyst used has a molar weight of 340 g/mole, the hafnium tetrakis (acetylacetone) (Column 3, line 57) also used in the catalyst has a molecular weight of 574.5 g/mol, and the Na2HPO4 used has a molecular weight of 142 g/mole. Assuming a starting concentration of 250 ppm of titanium catalyst and a 90:10 (Column 4, line 6) molar ratio of titanium catalyst to hafnium tetrakis (acetylacetone), there would be a total of 296.9 ppm of catalyst. If the Na2HPO4 is present in the amount of 50% of the catalyst (Column 4, lines 49-50), this gives a total of 148.5 ppm of Na2HPO4. This translates to 32.4 ppm of phosphorus alone or 99.3 ppm of phosphate. Because the

Na2HPO4 is oxidized to form a phosphate (Column 4, lines 21-24), it is the examiner's position that there will not be any Na2HPO4 in the polyester. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Na2HPO4 within the required concentration ranges for the benefit of increasing the reactivity of the system.

The previous combination is silent as to the stretching conditions during molding. Shelby discloses that it is well known in the art to mold parisons into containers using a stretch ratio of 9 ([0023]). Therefore, one of ordinary skill in the art would have found it obvious to create a resin with a stretch ratio required by Applicant because this is a well known stretch ratio for use in conventional molding processes (as disclosed by Shelby).

The previous combination discloses that the PET container be used for beverages (Column 1, line 17) but is silent as to the volume of the container, suggesting to one of ordinary skill in the art that any well known container size would be suitable. Fedderson discloses that it was well known in the art to create a beverage container that is a half of a liter in volume (Column 10, lines 38-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the invention of the above hypothetical combination to make containers within the range required by Applicant because these are well known container types in the art (as disclosed by Fedderson).

It is the examiner's position that the NSR is an inherent property of the resin. Therefore, because the art of record discloses a resin with the composition required by Applicant, it will inherently also have the NSR properties required by Applicant. In any

event, one of ordinary skill would have appreciated that the planar stretch ratio is matched to the NSR during the molding process (as evidenced by Sprayberry Page 2, lines 17-23). Sprayberry further discloses that this is beneficial for achieving desirable material distribution and optical properties in the final product (Page 2, lines 7-8). Therefore, one of ordinary skill would have found it obvious to match the NSR of the preform from the above combination to its planar stretch ratio for the benefit of achieving desirable material distribution and optical properties (as disclosed by Sprayberry).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 and 17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 7473755 in view of Shelby et al. (Pre-Grant Publication 2002/0166833) and Sprayberry et al. (WO 98/48994).

The amended claims require that the resin have an NSR of less than 10 (in claim 1) or less then 9.6 (in claims 8 and 17) and that the parison or container define at least one wall which are the only differences in scope between the present claims and those of the ‘755 patent. One of ordinary skill would have found it obvious to use the material of the '755 patent to create a container (which would inherently have a wall). It is also the examiner's position that because NSR is an inherent property of the resin and the composition of the resin is identical in the '755 patent, it will inherently have the NSR properties now being required by Applicant. In any event, Shelby discloses that it is well known in the art to mold parisons into containers using a stretch ratio of 9 ([0023]). Therefore, one of ordinary skill in the art would have found it obvious to create a resin with a stretch ratio required by Applicant in the presently presented claims because this is a well known stretch ratio for use in conventional molding processes (as disclosed by Shelby). One of ordinary skill would have appreciated that the planar stretch ratio is matched to the NSR during the molding process (as evidenced by Sprayberry Page 2, lines 17-23).

Response to Arguments

4. Applicant's arguments filed 1/18/2011 have been fully considered but they are not persuasive.

On page 6-9 of the remarks, Applicant argues that the combination of references used to make the rejection is improper because A) does not teach or otherwise provide a skilled artisan with any reasonable expectation of success to arrive at the claimed invention and B) does not address specific technical issues in the sulfomonomer modified polyester resin system.

In regards to issue A, the examiner respectfully disagrees. The rejection relies on the incorporation of Na2HPO4 (as disclosed by Banach) into the chemical reaction of Fagerburg. Fagerburg discloses creating PET using a titanium catalyst system (Column 2, line 6). Banach discloses that the productivity of a titanium-catalyzed PET reaction can be increased by adding Na2HPO4 (Column 4, lines 20-35). Therefore, there is clear expectation of success which is obtained from the express teachings of the prior art references themselves and an express motivation to combine the references. Furthermore, without ever even looking at the secondary reference to Banach, the primary reference to Fagerburg already suggests to a skilled artisan that a chemical of the same genus as Na2HPO4 should beneficially be added to the reaction (i.e., Fagerburg expressly discloses that a organic acid salt which has sodium as the cation should be added to the system in column 4, lines 35-45). Based on this disclosure of

Fagerburg alone, it would be obvious to a skilled artisan to add Na2HPO4 to the reaction even without turning to the disclosure of Banach. Therefore, not just one but both the primary and secondary reference obviate the addition of the claimed Na2HPO4 to the PET production process. In addition to there being a clear expectation of success, both the primary and secondary reference expressly recommend the proposed combination of references.

In regards to issue B, the examiner would like to begin by noting that Applicant appears to be arguing that in order for the combination of references to be proper, the references must provide the same motivation to combine that is recognized in the present Application. The examiner maintains the Banach clearly discloses that the productivity of the reaction can be increased by adding Na2HPO4 to the system and the fact that Applicant adds the Na2HPO4 for a different reason in now way detracts from the obviousness of the rejection. Furthermore, the examiner wishes to note that the prior art does recognize and address the specific sulfomonomer-based technical issues being addressed in the present application. For example, Applicant argues on page 4, lines 13-16 of the specification of the present application that Fagerburg does not disclose how to reduce DEG formation during preparation of the polyester from a sulfomonomer system. However, this is not true. Fagerburg discloses adding an organic acid salt which has sodium for the cation (Column 4, lines 35-45). A skilled artisan would appreciate that the purpose of this sodium based acid salt is to limit DEG formation, as evidenced by Column 1, lines 22-28 of USP 4579936 to O'Neill (already of

record). Furthermore, Fagerburg indicates that the acid salt is added in relation to the presence of the sulfomonomer (Column 2, lines 10-13). Therefore, Fagerburg encompasses using a sodium-based acid salt to reduce the DEG formation in a PET system that contains a sulfomonomer, which is precisely the technical issue that the present application is directed to. Fagerburg must be aware of how the presence of DEG affects the properties of the PET because Fagerburg mentions the possibility of there being DEG present on Column 1, lines 42-45 of the disclosure. O'Neill provides further evidence in Column 1, lines 22-28 that skilled artisan would appreciate from the disclosure of Fagerburg that the negative effects of DEG production need to be counter-acted. Applicant explains on page 7 of the remarks that the presence of DEG can (undesirably) increase NSR (natural stretch ratio). The examiner wishes to point out the Fagerburg is specifically concerned with making a plastic with a low stretch ratio (Fagerburg Column 6, lines 53-58) (O'Neill Column 1, lines 15-18).

Applicant argues on page 7 of the remarks that Fagerburg does not disclose a PET with an intrinsic viscosity of 0.6 to 1.0 and an NSR of less than 10. Fagerburg discloses a PET with an intrinsic viscosity of 0.3 to 0.9 (Column 2, lines 22-23), which reads directly on Applicant claimed range. Although it may be true that Fagerburg never expressly discloses what the NSR is, it is clear from Fagerburg that the intent is to minimize the NSR (Column 6, lines 53-58) and the disclosure even provides an exemplary NSR of 9 (Column 7, line 9). The examiner wishes to point out that in the rejection, the disclosure of Shelby was used to address the limitation requiring an NSR

of less than 10. Any argument that Fagerburg itself does not address this limitation is directed to the references individually.

Applicant argues on page 9 of the remarks that a skilled artisan would not appreciate from the disclosure of Banach that the presence of the phosphate compounds would suppress DEG byproduct. Again, the examiner wishes to highlight that the motivation that a skilled artisan would have had from the disclosure of Banach to add the Na2HPO4 compound is to increase the production reactivity. The fact that Applicant is concerned with a different benefit which this compound provides to the reaction system does not weigh against the rejection. In response to applicant's argument that Banach does not recognize that its disclosed phosphates are capable of reducing DEG production in system which contain sulfomonomers, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Even though Banach on its own provides a clear motivation for the combination of references, the examiner wishes to again point out that Fagerburg discloses adding the sodium acid salt due to the presence of the sulfomonomer (Column 1, lines 10-12) and that O'Neill provides evidence that a skilled artisan would appreciate that the sodium acid salt is there to prevent DEG formation. Although O'Neill is only specifically discussing the use of sodium acetate in the invention of Fagerburg,

Fagerburg expressly discloses that sodium acetate is only one example of the sodium-based salt acids than can be used (Column 4, line 50).

Applicant points out on page 9 of the remarks that the prior art does not disclose intentionally avoiding the presence of NaH2PO4 in order avoid the presence of DEG in the product. It is the examiner's position that because none of the references discloses that NaH2PO4 needs to be added with Na2HPO4, the addition of NaH2PO4 is not taking place and a skilled artisan would find it obvious from the combination of references to simply add Na2HPO4 on its own (inherently avoiding the addition of NaH2PO4). Furthermore, the examiner wishes to point out the Fagerburg expressly discloses that the sodium-based acid salts can be added to the system singularly, and not in mixtures with other salts (Column 4, line 48).

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN ROGERS whose telephone number is 571-270-7002. The examiner can normally be reached on Monday through Thursday, 7:30 to 5:00, and every other Friday, 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Martin Rogers/

/Richard Crispino/
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